C. AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended). A system for detection of an object in an area in space comprised of an image generated by waves in one of a visible and an invisible spectral range, the system comprising:

an imager configured such that ~~a~~ an original holographic image is projected onto the area;

a reception device ~~configured such~~ that ~~the reception device~~ registers the imaged area, wherein the reception device is specifically balanced for a spectral range corresponding to the waves; and

a computer configured with a recognition algorithm, wherein the ~~image~~ imaged area is recreated on the reception device and a difference between an image generation pattern and an image received is compared using the recognition algorithm, and wherein the comparison is used to project a modified holographic image that represents a change in the original holographic image that results from an object interacting with the original holographic image.

Claim 2 (Original). The system according to claim 1, wherein the imager is one of a reflective solid state imaging device and a transmissive solid state imaging device.

Claim 3 (Original). The system according to claim 1, wherein the reception device is a solid state sensing device.

Claim 4 (Currently Amended). The system according to claim 1, wherein the original holographic image represents one of an input terminal, a keyboard, a pointing device, a game, and a musical instrument.

Claim 5 (Currently Amended). A method for detecting an object in an area, the method comprising the steps of:

generating a holographic image as a reference for user interaction with a function available thereto in the area by a computer, the image appearing in a predetermined area and being seen by the user and a sensing device;

moving ~~an~~ the object into the predetermined area;

using a reception device specifically balanced for the spectral range corresponding to ~~the~~ at least one wave ~~waves~~ to detect the object;

one of mathematically and globally matching ~~the~~ an interference pattern imaged on the ~~sensor~~ sensing device with ~~the~~ an original pattern that is subtracted from ~~the~~ a current image pattern~~, mathematically, globally or otherwise~~; and

triggering a function by the object based on a position of the object determined during ~~in that the object dwells or moves in the field for~~ a predetermined time, wherein the function modifies the holographic image based on the position of the object and an interaction of the object with the holographic image.

Claim 6 (Currently Amended). A method for modifying ~~an~~ a generated original holographic template image to acknowledge or represent ~~in some manner the~~ an interface with a user, the method comprising the steps of:

(a) detecting ~~the~~ movement and location of an interaction by the user;

(b) determining an appropriate response for ~~the~~ an action by the user~~[what action]~~; and

(c) regenerating the ~~image of the~~ original holographic template image in response to the action by the user ~~to accommodate the functionality; and~~

~~(d) repeating steps a-c~~.

Claim 7 (Currently Amended). The method according to claim 6, further comprising the step of moving a mouse pointer associated with the object across ~~the~~ a projected area by moving a finger of ~~a~~ the user.

Claim 8 (Currently Amended). The method according to claim 6, further comprising the step of implementing ~~the~~ a control characteristic as one of a finger of ~~a~~ the user, a hand of ~~a~~ the user or a pointer.

Claim 9 (Currently Amended). The method according to claim 6, further comprising the step of implementing ~~the~~ a control characteristic as one of a finger of ~~a~~ the user, a hand of ~~a~~ the user or a pointer wherein the image of the device will change in response to the user's interaction, thereby giving the user feedback of successful [[(]]or unsuccessful[[)]] interaction.

Claims 10-12 (Canceled).